IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:)
MCCARTHY ET AL.) Attorney Docket No.
Serial No. 10/779,402)

Confirmation No. 2799) Examiner: M. NGUYEN

Filing Date: FEBRUARY 13, 2004) Art Unit: 2442

For: COMMUNICATIONS SYSTEM)
PROVIDING SERVER LOAD)

BALANCING BASED UPON WEIGHTED)
HEALTH METRICS AND RELATED)

METHODS

PRE-APPEAL BRIEF REQUEST FOR REVIEW

MS AF Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Responsive to the final Office Action of February 17, 2011 and the Advisory Action of May 9, 2011, and in connection with the Notice of Appeal filed concurrently herewith, please consider the remarks set out below.

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REMARKS

Based upon the arguments presented below, Applicant respectfully requests the Pre-Appeal Conference Panel to reconsider and withdraw the Examiner's rejections of the claims.

I. The Claimed Invention

Independent Claim 1 is directed to a communications system that includes a plurality of servers connected together in a network for processing a plurality of different job types having respective different resource usage characteristics associated therewith. Each server, after beginning execution of at least one job, determines its own respective health metric based upon the at least one job being executed thereby and weighs the health metric based upon the respective resource usage characteristic of the at least one job. The resource usage characteristic represents resources being consumed by the at least one job. The servers map the weighted health metrics for different resource usage characteristics to a common scale. The communications system includes a dispatcher for collecting the commonly scaled weighted health metrics from the servers by polling the servers for the weighted health metrics and distributing jobs to the servers based thereon.

Independent Claim 9 is directed to a load distributor for a plurality of servers. Independent Claim 14 is directed to a job distribution method for a plurality of servers. Independent Claim 17 is directed to a corresponding computer readable medium.

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II. The Claims Are Patentable

The Examiner rejected independent Claims 1, 9, 14, and 17 over the combination of Albert et al. and Dar. Albert et al. is directed to a system and method for selecting a server to handle a connection. The method includes receiving at a service manager a connection request intercepted by a network device having a forwarding agent that is operative to receive instructions from a service manager, the connection request having been forwarded from the forwarding agent on the network device to the service manager.

A preferred server is selected at the service manager from among a group of available servers. The preferred server is the server that is to service the connection request. Instructions are sent from the service manager to the forwarding agent. The instructions include the preferred server that is to service the connection request so that the connection request may be forwarded from the network device to the preferred server. The servers send feedback messages to the service manager. The service manager uses these feedback messages to perform load balancing.

The Examiner correctly recognized that Albert et al. fails to teach: (1) different resource usage characteristics; and (2) determination of a health metric of a server by that server based upon resource usage characteristics after beginning execution of a job. In an attempt to provide these critical deficiencies of Albert et al., the Examiner looked to Dar.

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Dar discloses a communications system including a switch, clients, a network, and servers. The switch performs typical routing functions such as network address translation from virtual addresses to actual addresses, routing of packets, and using access control lists. The switch also monitors the health of the servers by monitoring and aggregating metrics indicative of the health. The metrics include processor, memory, and input/output metrics. This monitoring can be periodic.

Even a selective combination of Albert et al. and Dar, however, fails to disclose a dispatcher for collecting the commonly scaled weighted health metrics from the servers by polling the servers for the weighted health metrics and distributing jobs to the servers based thereon, as recited in independent Claim 1, for example. The Examiner correlated the service manager of Albert et al. to the dispatcher of independent Claim 1, and the real machines of Albert et al. to the servers of independent Claim 1, citing col. 29, lines 34-43, and col. 31 line 44 of Albert et al. in support of this feature.

The very portion of Albert et al. cited by the Examiner, however, explains that the feedback messages may be sent to the service manager from either an individual server, or from a representative server that collects server feedback messages. This is not polling. In fact, this is the exact opposite of polling, because the servers send their feedback messages to the service manager without any request therefrom.

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Consequently, Albert et al., and therefore the combination of Albert et al. and Dar, fails to disclose a dispatcher for collecting the commonly scaled weighted health metrics from the servers by polling the servers for the weighted health metrics and distributing jobs to the servers based thereon, as recited in independent Claim 1. Independent Claim 1 is therefore patentable over the combination of Albert et al. and Dar. Independent Claims 9, 14, and 17 contain similar recitations, and are patentable over the combination of Albert et al. and Dar for the same reasons. The dependent claims, which recite yet further distinguishing features, are likewise patentable and require no further discussion herein.

III. Conclusion

In view of the foregoing arguments, it is respectfully requested that the Pre-Appeal Conference Panel reverse the Examiner's rejections of the claims.

Respectfully submitted,

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